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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/785,090	02/16/2001	Atsuko Saito	FUJ 17.716	6192

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EXAMINER	
PHAN, TRI H	

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 11/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/785,090	SAITO ET AL.	
	Examiner	Art Unit	
	Tri H. Phan	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) *12 and 13* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment/Arguments

1. This Office Action is in response to the Response/Amendment filed on June 17th, 2005. Claims 12-13 are now canceled. Claims 1-11 are now pending in the application.

Claim Objections

2. Claim 4 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 6. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-7 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bosloy et al.** (U.S.6,714,544; hereinafter refer as '**Bosloy**') in view of **Lawrence, Jeremy R.** (U.S.6,826,196; hereinafter refer as '**Lawrence**').

- In regard to claim 1, **Bosloy** discloses, *a switching system* (see figure 3) *comprising a switch* ('ATM nodes 434,436,438,440' in figure 3) *receiving a call setup request having an information element* (for example see 'step 100' in figure 4; col. 28, lines 51-53; wherein the information elements in the proxy SETUP message is defined in col. 21, lines 44-46); *a call control unit* ('call controller' in figure 5) *collating the information element and subscriber data, and extracting, from the subscriber data, network identification information that corresponds to the information element* (see figure 4, steps 100-102; col. 13, lines 3-27), *said network identification information including source routing information created by topology information from another node and hop-by-hop routing information* (for example see col. 13, lines 57-65; wherein, if the source routing is used, the signaling and network information are provided through the use of PNNI protocol as disclosed in col. 19, lines 59-61; col. 20, lines 1-5, e.g. "*source routing information created by topology information from another node*") *and selecting, based on a priority of said source routing information and said hop-by-hop routing information, one of a source routing network and a hop-by-hop routing network* (for example see col. 19, lines 54-57; where the "*priority*" is where the PNNI protocol is used or not, for routing by source routing or hop-by-hop routing). **Bosloy** does disclose about the call controller ("*call control unit*"), in establishing the path connection between the end points and network elements through the use of the routing table, as disclosed in col. 32, lines 36-43); however, **Bosloy** explicitly lacks what **Lawrence** discloses "*routing control unit*" (figure 3B shows the control unit 302 which contains signaling control, e.g. "*call control unit*", and routing control, e.g. "*routing control unit*", in collating and selecting route).

It would have been obvious to one of ordinary skill in the art to include the routing control unit for the purpose of allowing a switch to control the routing between several different network types (**Lawrence**, as in figure 5 and described in col. 5, lines 10-30). The motivation for wanting to choose a variety of different network types is to allow multiple different data types to be transmitted over a single backbone as this will save on cost and resources by not having to have a backbone network for each type of data.

- Regarding claim 2, in addition to features in base claim 1 (see rationales pertaining the rejection of base claim 1 discussed above), **Bosloy** further discloses, *wherein the source routing network and the hop-by-hop network are at least a B-ISUP network and a PNNI network respectively* (for example see col. 13, lines 57-65; wherein other networking models and other signalling procedures are a matter of design choice/preference to allow different data types to be transmitted over a single backbone).

- In regard to claims 3-6, in addition to features in base claim 1 (see rationales pertaining the rejection of base claim 1 discussed above), **Bosloy** further discloses, *wherein the information element is a subscriber identifier* ('calling and called party number' in table 1 in col. 22 and table 2 in col. 25) or *includes a value of a network identifier indicating a routing destination* ('connection identifier information element' in col. 22, line 62 through col. 23, line 50) or *a value of a traffic class* ('QoS parameter' in table 1 in col. 22 and table 2 in col. 25).

- Regarding claim 7, **Bosloy** discloses, *a switching system* (see figure 3) *comprising a switch* ('ATM nodes 434,436,438,440' in figure 3) *receiving a call setup request having an information element from a subscriber device* (for example see 'step 100' in figure 4; col. 28, lines 51-53; wherein the information elements in the proxy SETUP message is defined in col. 21, lines 44-46); *and selecting, based on a state of each of a plurality of multiple networks, one of a source routing network routing a packet based on topology information from another node and a hop-by-hop routing network of the plurality of multiple networks* (for example see col. 19, lines 54-57; where the "*state*" is where the PNNI protocol is used or not, for routing by source routing or hop-by-hop routing). **Bosloy** does disclose about the call controller ("*call control unit*"), in establishing the path connection between the end points and network elements through the use of the routing table, as disclosed in col. 32, lines 36-43); however, **Bosloy** explicitly lacks what **Lawrence** discloses "*routing control unit*" (figure 3B shows the control unit 302 which contains signaling control, e.g. "*call control unit*", and routing control, e.g. "*routing control unit*", in collating and selecting route).

It would have been obvious to one of ordinary skill in the art to include the routing control unit for the purpose of allowing a switch to control the routing between several different network types (**Lawrence**, as in figure 5 and described in col. 5, lines 10-30). The motivation for wanting to choose a variety of different network types is to allow multiple different data types to be transmitted over a single backbone as this will save on cost and resources by not having to have a backbone network for each type of data.

- Regarding claim 10, in addition to features in base claim 7 (see rationales pertaining the rejection of base claim 7 discussed above), **Bosloy** further discloses, *wherein if the transmitted call setup request for a source routing network is refused, the switch transmits the call setup request to another network* (For example see col. 19, lines 54-57; wherein, if the PNNI protocol is not used, e.g. "*call setup request for a source routing is refused*", the hop-by-hop routing is used).

- In regard to claim 11, in addition to features in base claim 7 (see rationales pertaining the rejection of base claim 7 discussed above), **Bosloy** further discloses, *wherein the call setup request from the subscriber device includes information elements on which routing is based* ('connection identifier information element' in col. 22, line 62 through col. 23, line 50), *and subscriber data that includes priorities corresponding to each of the information elements and network identifiers corresponding to each of the information elements* (for example see Note 9 in col. 22, lines 47-53; wherein the PNNI signalling and setup message of the network connection request message is preferred as disclosed in col. 19, lines 38-44; and where the virtual channel is indicated by the user in the information element, e.g. "*priority*"); *and selecting a network among the multiple networks based on a network identifier corresponding to top priority* (for example see col. 19, lines 54-57; where the "*priority*" is where the PNNI protocol is used or not, for routing by source routing or hop-by-hop routing). **Bosloy** does disclose about the call controller ("*call control unit*"), in establishing the path connection between the end points and network elements through the use of the routing table, as disclosed in col. 32, lines 36-43); however, **Bosloy** explicitly lacks what **Lawrence** discloses "*routing control unit*" (figure 3B shows the

control unit 302 which contains signaling control, e.g. "*call control unit*", and routing control, e.g. "*routing control unit*", in collating and selecting route).

It would have been obvious to one of ordinary skill in the art to include the routing control unit for the purpose of allowing a switch to control the routing between several different network types (**Lawrence**, as in figure 5 and described in col. 5, lines 10-30). The motivation for wanting to choose a variety of different network types is to allow multiple different data types to be transmitted over a single backbone as this will save on cost and resources by not having to have a backbone network for each type of data.

5. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bosloy et al.** (U.S.6,714,544) in view of **Lawrence, Jeremy R.** (U.S.6,826,196) as applied to claims 13-16 in part 4 above of this office action above, and further in view of **Hasegawa et al.** (U.S.5,878,029; hereinafter refer as '**Hasegawa**').

- In regard to claim 8, in addition to features in base claim 7 (see rationales pertaining the rejection of base claim 7 discussed above), the combination of **Bosloy** and **Lawrence** does discloses about the system of claim 7, and the QoS parameter in the information elements of the proxy setup message (for example see **Bosloy**: 'QoS parameter' in table 1 in col. 22 and table 2 in col. 25). However, **Bosloy** and **Lawrence** lack what **Hasegawa** discloses, *wherein the routing control unit selects a network having a greater remaining bandwidth from the source routing network or the hop-by-hop routing network* (col. 7, lines 7-20 whereby selecting the network with the least wasted residual bandwidth, the network with the greatest remaining bandwidth has

effectively been selected). It would have been obvious to one with ordinary skill in the art at the time of invention to include the selecting of the network with the greatest remaining bandwidth for the purpose of not overloading networks, e.g. 'QoS'. The motivation for not overloading networks is so that the entire system of all networks will function more efficiently.

- Regarding claim 9, in addition to features in base claim 7 (see rationales pertaining the rejection of base claim 7 discussed above), the combination of **Bosloy** and **Lawrence** does discloses about the system of claim 7, and the QoS parameter in the information elements of the proxy setup message (for example see **Bosloy**: 'QoS parameter' in table 1 in col. 22 and table 2 in col. 25). However, **Bosloy** and **Lawrence** lack what **Hasegawa** discloses, *wherein the routing control unit selects the network having a smallest quantity per unit time from a source routing network or the hop-by-hop routing network* (col. 7, lines 7-20 whereby selecting the network with the least wasted residual bandwidth, the network with the least amount of calls has effectively been selected because it logically follows that the smaller the number of calls on the network the more bandwidth there is available). It would have been obvious to one with ordinary skill in the ad at the time of invention to include the selecting of the network with the smallest call quantity for the purpose of not overloading networks, e.g. 'QoS'. The motivation for not overloading networks is so that the entire system of all networks will function more efficiently.

Response to Amendment/Arguments

6. Applicant's arguments filed on February 5th, 2004 with respect to claims 2, 4 and 7-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rochberger et al. (U.S.6,147,971) and **Burns et al.** (U.S.6,665,295) are also cited to show devices and methods for improving routing method in PNNI based ATM networks in the telecommunication architectures, which are considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri H. Phan, whose telephone number is (571) 272-3074. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on (571) 272-3126.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(571) 273-8300

Hand-delivered responses should be brought to Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BRIAN NGUYEN
PRIMARY EXAMINER

Tri H. Phan
November 22, 2005